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Docket No.: 20780 US (C38435/124164)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#4

In re Application of :

Mads GRUENBERG, *et al.*

Serial No.: 10/016,616

Filed: October 30, 2001

For: **OPTIMIZATION OF  
FERMENTATION PROCESSES**

)

)

Examiner: Not yet assigned

)

Art Unit: 2122

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MAR 15 2002

Technology Center 2100

New York, New York  
March 8, 2002

**INFORMATION DISCLOSURE STATEMENT UNDER RULE 1.56**

Commissioner for Patents  
Washington, DC 20231

Sir:

Applicants wish to make of record the following documents (clean copies and  
Form PTO-1449 are enclosed).

**FOREIGN PATENT DOCUMENTS**

B1 FR 2 771 421 A1  
B2 WO 97/36993

**OTHER DOCUMENTS**

- C1 Fleury, *et al.*, "Modeling and Control Strategies for the Transformation of D-Sorbitol to L-Sorbose on a Laboratory Bioreactor," Advances in Bioprocess Engineering, Netherlands: Kluwer Academic Publishers, pp. 313-320 (1994)
- C2 St. Freyer, *et al.*, "Computer-Aided Medium Optimization," DECHEMA Biotechnology Conferences 5, VCH Weinheim, New York, Basel, Cambridge, Tokyo, pp. 387-390 (1992)
- C3 Gollmer, *et al.*, "Fieldbus Application in the Hierarchical Automation Structure of a Biotechnological Pilot Plant," Journal of Biotechnology, Vol.

40, pp. 99-109 (1995)

- C4 Haas, "Unified Kinetic Treatment for Growth on Dual Nutrients," Biotechnology and Bioengineering, Vol. 44, pp. 154-164 (1994)
- C5 Kennedy, *et al.*, "Designing Fermentation Media: A Comparison of Neural Networks to Factorial Design," Biotechnology Techniques, Vol. 6, No. 4, pp. 293-298 (1992)
- C6 Luttmann, *et al.*, "Mathematical Modeling, Parameter Identification and Adaptive Control of Single Cell Protein Processes in Tower Loop Bioreactors," Adv. Biochem. Eng. Biotechnol., Vol. 32, pp. 95-205 (1985)
- C7 Luttmann, *et al.*, "Development of Control Strategies for High Cell Density Cultivations," Mathematics and Computers in Simulation, Vol. 37, pp. 153-164 (1994)
- C8 Posten, "Basic Concepts of Computer Modelling and Optimization in Bioprocess Application," Process Computations in Biotechnology, New Delhi: McGraw-Hill, pp. 1-49 (1994)
- C9 Sonnleitner, *et al.*, "Automatic Bioprocess Control. 1. A General Concept," Journal of Biotechnology, Vol. 19, pp. 1-18 (1991)
- C10 Sonnleitner, "Bioprocess Automation and Bioprocess Design," Journal of Biotechnology, Vol. 52, pp. 175-179 (1997)
- C11 Thatipamala, *et al.*, "On-line State Estimation and Adaptive Optimization Using State Equations for Continuous Production of Bioethanol," Journal of Biotechnology, Vol. 48, pp. 179-190 (1996)
- C12 DeWulf, *et al.*, "Optimized Synthesis of L-Sorbose by C<sub>5</sub>-Dehydrogenation of D-Sorbitol with *Gluconobacter oxydans*," Biotechnology and Bioengineering, Vol. 69, No. 3, pp. 339-343 (2000)
- C13 Derwent English language abstract of FR 2 771 421 A1 (Document B1 above).

Applicants request that these documents be considered by the Examiner before issuance of a first office action on the merits and made of record in this file. The Examiner is also asked to initial and return a copy of the enclosed PTO-1449 form to evidence such consideration.

Documents B1, B2, C11 and C12 above were cited in a Search Report dated February 11, 2002 (copy enclosed) which issued in a foreign counterpart application.

Document B1 above is not in English. Therefore, an English language abstract is being submitted as Document C13.

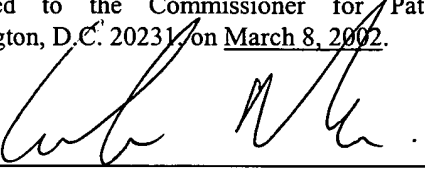
Document B2 above is also not in English. However, an English abstract is provided on the front page of the patent.

This Information Disclosure Statement is being filed in accordance with the following provisions:

[x] 37 CFR § 1.97(b)(3) To the best of the undersigned's knowledge, before the mailing date of a first Office Action on the merits. No fee is required.

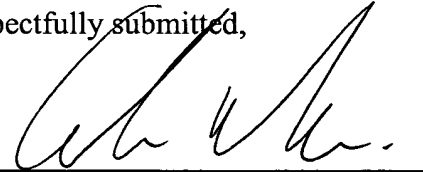
If it is determined that a fee is required as set forth in 37 CFR § 1.17(p) or 1.17(i)(1), or if any additional fees are required, please charge such fee (or credit any overpayment) to Deposit Account No. 02-4467. A duplicate copy of this document is enclosed.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231, on March 8, 2002.

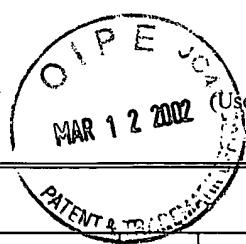


Gonzalo Merino, Reg. No. 51,192

Respectfully submitted,

By: 

Gonzalo Merino  
Registration No. 51,192  
BRYAN CAVE LLP  
245 Park Avenue  
New York, NY 10167-0034  
(212) 692-1800

Form PTO-1449 (Rev. )	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 20780 US (C38435/124164)	SERIAL NO. 10/016,616
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		APPLICANT Mads GRUENBERG <i>et al.</i>	
		FILING DATE October 30, 2001	ART UNIT 2122

## U.S. PATENT DOCUMENTS

Examiner Initial	Cite No.	U.S. Patent Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
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## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	B1	FR 2 771 421 A1	5-28-1999	France				X
	B2	WO 97/36993	10-9-1997	PCT				X

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

C1	Fleury, <i>et al.</i> , "Modeling and Control Strategies for the Transformation of D-Sorbitol to L-Sorbose on a Laboratory Bioreactor," <u>Advances in Bioprocess Engineering</u> , Netherlands: Kluwer Academic Publishers, pp. 313-320 (1994).		
C2	St. Freyer, <i>et al.</i> , "Computer-Aided Medium Optimization," <u>DECHEMA Biotechnology Conferences 5</u> , VCH Weinheim, New York, Basel, Cambridge, Tokyo, pp. 387-390 (1992).		
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C9	Sonnleitner, <i>et al.</i> , "Automatic Bioprocess Control. 1. A General Concept," <u>Journal of Biotechnology</u> , Vol. 19, pp. 1-18 (1991).		
<table border="1"> <tr> <td>EXAMINER</td> <td>DATE CONSIDERED</td> </tr> </table>		EXAMINER	DATE CONSIDERED
EXAMINER	DATE CONSIDERED		
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Form PTO-1449  
(Rev. )U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

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BY APPLICANT

(Use several sheets if necessary)

APPLICANT

Mads GRUENBERG *et al.*

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C10	Sonnleitner, "Bioprocess Automation and Bioprocess Design," <u>Journal of Biotechnology</u> , Vol. 52, pp. 175-179 (1997).
C11	Thatipamala, <i>et al.</i> , "On-line State Estimation and Adaptive Optimization Using State Equations For Continuous Production of Bioethanol," <u>Journal of Biotechnology</u> , Vol. 48, pp. 179-190 (1996).
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